

CLAIMS

What is claimed is:

- 5 1. A timepiece having a display for displaying a digit provided on a ring which itself has a plurality of digits provided thereon, wherein the timepiece comprises an integrated circuit operable in at least (i) a date display mode and (ii) a counting mode, wherein the timepiece further comprises:
  - a gearing assembly comprising one or more wheels, being meshingly coupled to  
10 the ring so that the rotation of the one or more wheels causes the rotation of the ring;
  - a motor, the motor rotatably coupled to the at least one or more wheels of the gearing assembly, wherein the motor has a rotatable member such that the rotation thereof causes the ring to rotate; and
  - mode selecting means for selecting between at least the date display mode and the  
15 counting mode;
  - wherein when in the date display mode the ring rotates at a first rate and when in the counting mode the ring rotates at a second rate different from the first rate.
- 20 2. The timepiece as claimed in claim 1, wherein at least the counting mode is user selectable.
3. The timepiece as claimed in claim 2, wherein the mode selecting means comprises an externally actuatable switch.
- 25 4. The timepiece as claimed in claim 1, wherein in the date display mode the ring rotates in a first direction being clockwise or counterclockwise, and wherein in the counting mode the ring rotates in the other direction.
- 30 5. The timepiece as claimed in claim 1, wherein in the date display mode, a displayed digit is representable of the then current date of the month; and  
wherein:
  - when placed in the counting mode, the ring is rotatable to a selectable starting position such that the displayed digit changes from the digit representing

the then current date of the month to a starting digit representing a start time for a count; and

when placed back in the date display mode, the ring rotates to once again display the digit representing the then current date of the month.

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6. The timepiece as claimed in claim 5, wherein the integrated circuit maintains correct date information so that when the timepiece returns to the date display mode the digit representing the then current date is displayed.

10 7. The timepiece as claimed in claim 1, wherein the ring rotates in one of a clockwise and counterclockwise direction at the first rate, wherein the first rate is at least essentially  $(360/31)^\circ$  of rotation essentially every 24 hours.

15 8. The timepiece as claimed in claim 1, wherein the ring rotates in one of a clockwise and counterclockwise direction at the second rate, wherein the second rate is at least essentially  $(360/31)^\circ$  of rotation essentially every minute.

9. The timepiece as claimed in claim 5, wherein the mode selecting means comprises a switch and wherein actuation of the switch causes the ring to rotate.

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10. The timepiece as claimed in claim 9, wherein repeated and/or continuous actuation of the switch causes the displaying of successive digits on the ring.

25 11. The timepiece as claimed in claim 1, wherein the motor is a stepping motor, and the stepping motor comprises a rotor rotatably coupled to the at least one or more wheels of the gearing assembly, wherein the rotation of the rotor causes the ring to rotate.

30 12. A timepiece having a display for displaying a digit provided on a ring which itself has a plurality of digits provided thereon, wherein the timepiece comprises an integrated circuit operable in at least (i) a date display mode and (ii) a counting mode, wherein the timepiece further comprises:

a gearing assembly comprising one or more wheels, being meshingly coupled to the ring so that the rotation of the one or more wheels causes the rotation of the ring;

a motor, the motor rotatably coupled to the at least one or more wheels of the gearing assembly, wherein the motor has a rotatable member such that the rotation thereof causes the ring to rotate; and

mode selecting means for selecting between at least the date display mode and the counting mode;

wherein:

the motor causes the rotation of the ring in both the date display mode and the counting mode; and

when in the counting mode, the ring rotates in response to actuation of an externally actuated switching means.

13. The timepiece as claimed in claim 12, wherein in the date display mode, a displayed digit is representable of the then current date of the month; and

wherein:

when placed in the counting mode, the ring is rotatable to a selectable starting position such that the displayed digit changes from the digit representing the then current date of the month to a starting digit representing the start of a count; and

when placed back in the date display mode, the ring rotates to once again display the digit representing the then current date of the month.

14. The timepiece as claimed in claim 13, wherein the integrated circuit maintains correct date information so that when the timepiece returns to the date display mode the digit representing the then current date is displayed.

15. The timepiece as claimed in claim 12, wherein:

in the date display mode the ring rotates at a rate at least essentially  $(360/31)^\circ$  of rotation every 24 hours; and

in the counting mode the ring is rotatable at a rate significantly faster than the first rate.

16. The timepiece as claimed in claim 15, wherein the rate at which the ring is rotatable in the counting mode is at least essentially  $(360/31)^\circ$  per actuation of the

switching means.

17. The timepiece as claimed in claim 12, wherein repeated and/or continuous actuation of the switching means causes the displaying of successive digits on the ring.

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18. The timepiece as claimed in claim 12, wherein the motor is a stepping motor, and the stepping motor comprises a rotor rotatably coupled to the at least one or more wheels of the gearing assembly, wherein the rotation of the rotor causes the ring to rotate.

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